

Attorney Docket No.: MCP-0141
Inventors: Halpern and England
Serial No.: 09/744,406
Filing Date: January 22, 2001
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (previously amended): A cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, said cellular immunogen comprising cells which are allogeneic with respect to the host, said allogeneic cells having been transfected with at least one vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the cognate transgene in the transfected cells, wherein the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene.

Claim 2: (canceled)

Claim 3 (previously amended): The cellular immunogen
Accordingly to claim 1 wherein the allogeneic transfected cells are non-dividing.

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Claims 4-6(canceled):

Claim 7 (previously amended): The cellular immunogen
Accordingly to claim 1 wherein the allogeneic cells have been
transfected with a plurality of vectors, each vector encoding a
different non-transforming cognate transgene.

Claim 8: (canceled)

Claim 9 (previously amended): The cellular immunogen
Accordingly to claim 1 wherein the allogeneic cells comprise
fibroblasts or bone marrow-derived antigen-presenting cells.

Claim 10 (previously amended): A method for preparing a
cellular immunogen for immunizing a host against the effects of
the product of a target proto-oncogene, the overexpression of
which target proto-oncogene is associated with a cancer, the
method comprising:

transfecting cells which are allogeneic with respect to the
host with at least one vector comprising at least one non-
transforming transgene cognate to the target proto-oncogene,
said non-transforming cognate transgene derived by deletion of a
sequence of the transgene essential for transformation and
consisting of wild-type sequence outside the deleted sequence,
and a strong promoter to drive the expression of the non-
transforming cognate transgene in the transfected cells, wherein

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the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene.

Claim 11: (canceled)

Claim 12 (previously amended): The method of claim 10 wherein the allogeneic cells are non-dividing.

Claims 13-15: (canceled)

Claim 16 (previously amended): The method Accordingly to claim 10 wherein the allogeneic cells are transfected with a plurality of vectors, each vector encoding a different non-transforming cognate transgene.

Claim 17: (canceled)

Claim 18 (previously amended): The method Accordingly to claim 10, wherein the allogeneic cells comprise fibroblasts or bone marrow-derived antigen-presenting cells.

Claims 19-33 (canceled)

Claim 34 (previously amended): The cellular immunogen Accordingly to claim 9 wherein the bone marrow-derived antigen-presenting cells are selected from the group consisting of macrophages, dendritic cells, and Langerhans cells.

Claim 35 (previously amended): The method Accordingly to claim 18 wherein the bone marrow-derived antigen-presenting cells

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are selected from the group consisting of macrophages, dendritic cells, and Langerhans cells.

Claim 36-38 (canceled)

Claim 39: (previously added) A method for inducing an immune response that targets tumor cells by recognition of proto-oncogene-specific antigenicity in a host comprising transplanting into the host the cellular immunogen of claim 1.

Claim 40: (new) A cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, said cellular immunogen comprising cells which are allogeneic with respect to the host, said allogeneic cells having been transfected with at least one vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the cognate transgene in the transfected cells, wherein the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene and the target proto-oncogene is

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selected from the group consisting of and the target proto-oncogene is selected from the group consisting of AKT-2, *c-erbB-2* (*HER2/neu*), *MDM-2*, *c-myc*, *c-myb*, *c-ras*, *c-src* and *c-yes*.

Claim 41: (new) A method for preparing a cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, the method comprising:

transfecting cells which are allogeneic with respect to the host with at least one vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the non-transforming cognate transgene in the transfected cells, wherein the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene and the target proto-oncogene is selected from the group consisting of AKT-2, *c-erbB-2* (*HER2/neu*), *MDM-2*, *c-myc*, *c-myb*, *c-ras*, *c-src* and *c-yes*.

Claim 42: (new) A cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene,

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the overexpression of which target proto-oncogene is associated with a cancer, said cellular immunogen comprising cells which are allogeneic with respect to the host, said allogeneic cells having been transfected with at least one vector comprising at least one non-transforming transgene cognate to the target proto-oncogene, said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the cognate transgene in the transfected cells, wherein the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene and the target proto-oncogene is selected from the group consisting of *c-erbB-2* (HER2/*neu*), *c-myc* and *c-src*.

Claim 43: (new) A method for preparing a cellular immunogen for immunizing a host against the effects of the product of a target proto-oncogene, the overexpression of which target proto-oncogene is associated with a cancer, the method comprising:

transfecting cells which are allogeneic with respect to the host with at least one vector comprising at least one non-transforming transgene cognate to the target proto-oncogene,

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said non-transforming cognate transgene derived by deletion of a sequence of the transgene essential for transformation and consisting of wild-type sequence outside the deleted sequence, and a strong promoter to drive the expression of the non-transforming cognate transgene in the transfected cells, wherein the non-transforming cognate transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene and the target proto-oncogene is selected from the group consisting of *c-erbB-2* (HER2/*neu*), *c-myc* and *c-src*.